

~~08 OCT 2004~~

INTERNATIONAL SEARCH REPORT

Intern

Application No.

PCT

03/11130

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B32B27/28 B32B1/08 F16L11/04 F16L11/12 B32B7/02
B32B7/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B32B F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal. WPI Data. PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 00657 A (CADILLAC RUBBER AND PLASTICS, INC.) 11 January 1996 (1996-01-11)	1-4, 6-8, 10-20, 22-24, 26
Y	page 2, line 27 -page 4, line 11 page 10, line 5-42; figure 1 ---	9
X	US 5 641 445 A (DUKES GLENN V ET AL) 24 June 1997 (1997-06-24) column 5, line 63 -column 6, line 51; figure 3 ---	1-4, 15-23
X	WO 02 16131 A (DYNEON LLC) 28 February 2002 (2002-02-28) page 6, line 12 -page 7, line 14; table 2 ---	1, 15, 23
	--- -/--	

X Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

10 July 2003

Date of mailing of the international search report

18/07/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer _____

Schweissguth, M

INTERNATIONAL SEARCH REPORT

Internu I Application No

PCT/03/11130

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 679 425 A (PLUMLEY STEPHEN) 21 October 1997 (1997-10-21) column 3, line 59 -column 4, line 39; figure 1 ---	1-4, 15, 23
Y	US 5 588 469 A (KAKIUCHI DAISUKE ET AL) 31 December 1996 (1996-12-31) column 3, line 8-12 ---	1-4, 15, 23
Y	EP 1 096 190 A (TOKAI RUBBER IND LTD) 2 May 2001 (2001-05-02) paragraphs '0010!-'0017! ---	1-4, 15, 23
Y	US 6 106 914 A (KANBE SHINOBU ET AL) 22 August 2000 (2000-08-22) column 17, line 41 ---	9
Y	EP 1 180 633 A (TOKAI RUBBER IND LTD) 20 February 2002 (2002-02-20) paragraph '0029! ---	1-4, 15, 23
A	EP 0 979 968 A (TOKAI RUBBER IND LTD) 16 February 2000 (2000-02-16) paragraph '0017!; figure 1 ---	1-26
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04, 31 August 2000 (2000-08-31) & JP 2000 006317 A (TOKAI RUBBER IND LTD), 11 January 2000 (2000-01-11) abstract ---	1-26
A	PATENT ABSTRACTS OF JAPAN vol. 016, no. 474 (M-1319), 2 October 1992 (1992-10-02) & JP 04 171383 A (TOYODA GOSEI CO LTD), 18 June 1992 (1992-06-18) abstract ---	1-26
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 281 (M-0986), 18 June 1990 (1990-06-18) & JP 02 085591 A (YAMASHITA RUBBER KK), 27 March 1990 (1990-03-27) abstract -----	1-26

INTERNATIONAL SEARCH REPORT

Intern: Application No
PCT/03/11130

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9600657 A	11-01-1996	WO 9600657 A1 DE 69426120 D1 DE 69426120 T2 EP 0716632 A1 ES 2153426 T3 US 5941286 A	11-01-1996 16-11-2000 10-05-2001 19-06-1996 01-03-2001 24-08-1999
US 5641445 A	24-06-1997	WO 9846412 A1 AU 2733397 A BR 9714610 A DE 980306 T1 EP 0980306 A1 JP 2001517158 T	22-10-1998 11-11-1998 23-05-2000 05-10-2000 23-02-2000 02-10-2001
WO 0216131 A	28-02-2002	AU 2908301 A EP 1313613 A1 WO 0216131 A1	04-03-2002 28-05-2003 28-02-2002
US 5679425 A	21-10-1997	NONE	
US 5588469 A	31-12-1996	JP 2932980 B2 JP 8169085 A	09-08-1999 02-07-1996
EP 1096190 A	02-05-2001	US 6340511 B1 EP 1096190 A1	22-01-2002 02-05-2001
US 6106914 A	22-08-2000	JP 3191755 B2 JP 10264314 A	23-07-2001 06-10-1998
EP 1180633 A	20-02-2002	JP 2002054779 A JP 2002098282 A CA 2343585 A1 EP 1180633 A2 US 2002017787 A1	20-02-2002 05-04-2002 07-02-2002 20-02-2002 14-02-2002
EP 0979968 A	16-02-2000	JP 2000055248 A JP 2000052446 A EP 0979968 A2	22-02-2000 22-02-2000 16-02-2000
JP 2000006317 A	11-01-2000	NONE	
JP 04171383 7 A		NONE	
JP 02085591 7 A		NONE	